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NEW SPECIES AND NEW RECORDS OF PSEPHENIDAE
FROM ASIA
(COLEOPTERA)

INTRODUCTION

Most genera of Psephenidae have been reviewed taxonomically. Recently we received a number of unidentified specimens for identification. Among this material, the Iranian psephenids are especially noteworthy, because this family has never been recorded from that country.

In this paper we describe four new species from Iran, India, Malaysia and Indonesia, and we provide new distribution records for 13 taxa.

MATERIAL AND METHODS

The terminology used herein follows LEE, YANG & SATÔ (1997, 1999) for *Macroebria* Pic, LEE, YANG & SATÔ (1998) for *Ectopria* LeConte and LEE, JÄCH & YANG (1998) for *Schinostethus* Waterhouse.

Specimens examined are deposited in the following museums or institutions:

BMNH	The Natural History Museum, London, United Kingdom
MSNG	Museo Civico di Storia Naturale "Giacomo Doria", Genova, Italy

* Applied Zoology Division, Taiwan Agricultural Research Institute, Taichung, Taiwan.

** Naturhistorisches Museum, Vienna, Austria

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NMEG	Naturkundesmuseum, Erfurt, Germany
NMNS	National Museum of Natural Science, Taichung, Taiwan
NMPC	National Museum (Natural History), Prague, Czech Republic
NMW	Naturhistorisches Museum, Vienna, Austria

In the species descriptions the following abbreviations are used:

LE = maximum length of elytron

LP = length of middle of pronotum

WE = maximum width of elytra

WP = maximum width of pronotum

***Dicranopselaphus brevicornis* Lee & Yang**

Dicranopselaphus brevicornis Lee & Yang, 1996: 173

1 ♂: "Indonesia: Sulawesi Utara, Dumoga-Bone N. P. April-May 1985, 'Clarke' Camp Lower montane forest, 1140 m, R. Ent. Soc. Lond., Project Wallace B.M. 1985-10, Malaise trap" (BMNH); 1 ♀, same as previous, but with different date (6 December 1985) and altitude (Lowland forest ca. 200m) (BMNH).

Distribution: Indonesia (Sumatra, Sulawesi: new record).

***Dicranopselaphus emmanueli* (Pic)**

Grammeubria emmanueli Pic, 1918: 13

Dicranopselaphus emmanueli (Pic): LEE & YANG 1996; LEE, YANG & SATÔ 2000

1 ♂, 2 ♀♀: "Sarawak, Kuching dist. Mt. Penrissen, 1000 m 24-26.3.1994 Sv. Bílý leg." (NMPC); 1 ♂: "Malaysia-W, Pahang 20 km E of Ioph, 1500 m Cameron Highlands, Tanah Rata, 16-18.IV.2000, P. Čechovský leg." (NMPC); 1 ♂: "Malaysia W., Johor 40 km N of Kota Tinggi Kampong Uhi Sedili env. 23-28.III.2004, Čechovský Petr leg." (NMPC).

Distribution: Philippines (Luzon, Mindanao, Palawan), East

Malaysia (Sabah, Sarawak), West Malaysia (Pahang, Johor: new records), Indonesia (Sumatra).

***Dicranopselaphus flavus* Lee & Yang**

Dicranopselaphus flavus Lee & Yang, 1996: 174

1 ♂: "Urung Tama Sibolangit, E. Sumatra, 30.X.1999, H. Taki-zawa leg." (NMNS).

Distribution: East Malaysia (Sabah), Indonesia (Sumatra: new record).

***Dicranopselaphus imparis* Lee & Yang**

Dicranopselaphus imparis Lee & Yang, 1996: 565

1 ♂, 1 ♀: "Ban Saleui, 1350 m, Xamneua, Laos 21-24.VI.2003, M. Sato leg." (NMNS); 1 ♀: "Phou Pan, 1750 m, Xamneua, Laos 16-21.VI.2003, M. Sato leg." (NMNS).

Distribution: Vietnam, Laos (new record).

***Dicranopselaphus malickyi* Lee & Yang**

Dicranopselaphus malickyi Lee & Yang, 1996: 192

1 ♂, 3 ♀♀: "Vietnam, N; N of Hanoi, Sa Pa vii. Env., 1250 m NN Hoang Lien Son Nat. Park, 05.VI.-09.VI.1998, leg. A. Napo-lov" (NMEG).

Distribution: Thailand, Myanmar, Vietnam (new record).

***Ectopria iranensis* n. sp. (Figs 1-3)**

Holotype ♂: "S Iran, Kushk N. Masiri, 1800 m 12.6.1973 / Loc. no. 237 Exp. Nat. Mus. Praha" (NMPC).

Male. Length 3.3 mm, width 2.1 mm. Coloration brown; head darker blackish-brown, prosternum and proepisternum yellowish-

brown. Antennae lost. Maxillary palpus (Fig. 3) slender, terminal segment bifurcate, relative lengths of segments 2-4 about 2.2 : 1 : 1.7. Labial palpus (Fig. 2) small, about 0.5 times as long as maxillary palpus, segment 2 subequal to segment 3, terminal segment bifurcate. $WP/LP = 2.64$; $LE/WE = 1.21$; $WP/WE = 0.87$.

Aedeagus (Fig. 1) 4.4 times as long as wide. Penis long, 0.78 times total length of aedeagus, apex narrowly rounded, gradually narrowed toward apex. Parameres widest at middle, abruptly narrowed near base, lateral margin concave in apical third; mesal margin connected at middle. Fibula 0.3 times total length of aedeagus; Y-shaped.

E t y m o l o g y . This species is named for the type locality.

R e m a r k s . This species is characterized by its elongate aedeagus and by its bifurcate maxillary and labial palpi.

***Granuleubria pakistanica* Jäch & Lee**

Granuleubria pakistanica Jäch & Lee, 1994: 228; LEE & YANG 1999

3 ♂♂: "SE Iran, 1-2.4.1973 env. Sarbaz, valley of river Sarbaz / Loc. no. 145 Exped. Nat. Mus. Praha" (NMPC).

Distribution: Nepal, Pakistan, Iran (new record).

***Jaechanax insignis* (Fairmaire)**

Eubrianax insignis Fairmaire, 1904: 87

Jaechanax insignis (Fairmaire): LEE, SATÔ & YANG 2000b

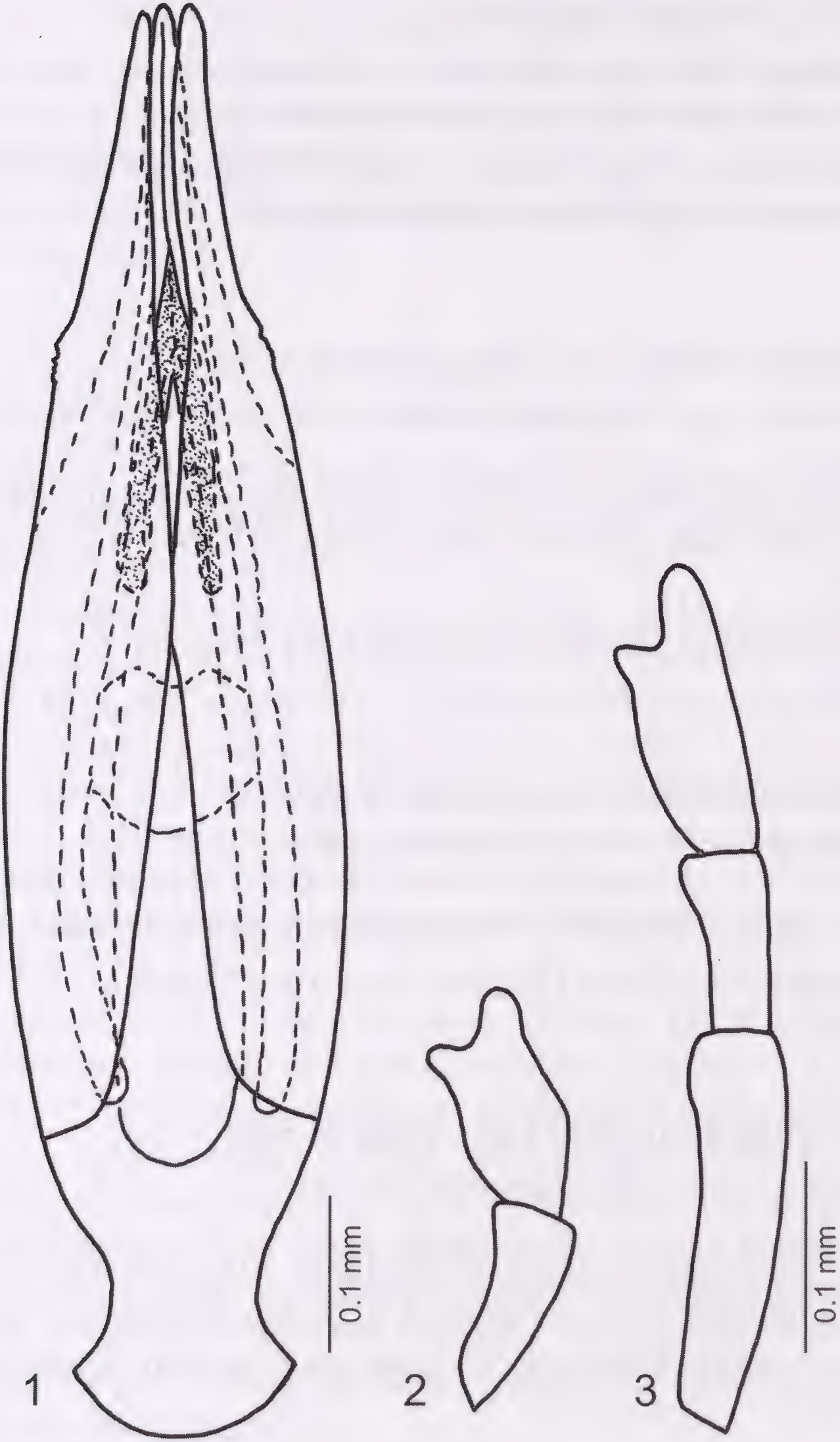
2 ♂♂: "Bang Phra Chong Buri Prov., E. Thailand, 18.V.2002, S. Tsuyuki leg." (NMNS).

Distribution: Vietnam, Laos, Myanmar, Thailand (new record).

***Jaechanax major major* (Pic)**

Eubrianax major Pic, 1913: 172

Jaechanax major (Pic): LEE, SATÔ & YANG 2000b



Figs 1-3: *Ectopria iranensis* n. sp., male. 1 - aedeagus; 2 - labial palpus; 3 - maxillary palpus.

1 ♂: “Nep[al], Narayan/Chitwan 13 km W Sauraha, Kasara, Chitwan-NP / 27°33'07"N, 84°21'59"E, 20.VI.2005, 180 m, leg. A. Weigel, dec. Forest” (NMEG).

Variation: this specimen has a yellowish-brown body, but the apical halves of the elytra are dark brown.

Distribution: Nepal (new record), Thailand, Malaysia, Indonesia (Sumatra, Java), Philippines (Mindanao).

***Macroebria bella* Lee, Yang & Satô**

Macroebria bella Lee, Yang & Satô, 1999: 190

1 ♀: “Vietnam, N. 100 km SSW Hanoi, 40 km SW Than Hoa, Ben En National Park, 50 m 23-28.VII.1997, lg. A. Napolov” (NMEG).

Distribution: Thailand, Vietnam (new record).

***Macroebria bicolor* Lee, Yang & Satô**

Macroebria bicolor Lee, Yang & Satô, 1997: 139

1 ♂: “Laos: Lakxao, 13-14.III.2005, leg. C.- F. Lee” (NMNS).

Distribution: China (Fujian), Laos (new record).

***Macroebria contracta* Lee, Yang & Satô**

Macroebria contracta Lee, Yang & Satô, 1999: 191

1 ♀: “Vietnam, N. 100 km SSW Hanoi, 40 km SW Than Hoa, Ben En National Park, 50 m, 23-28.VII.1997. leg. A. Napolov” (NMEG).

Distribution: Thailand, Vietnam (new record), Laos, Indonesia (Sumatra).

***Macroebria monstrosa* Lee, Yang & Satô**

Macroebria monstrosa Lee, Yang & Satô, 1999: 197

4 ♂♂: "Giava [Java], Tcibodas, Ott. 1874, O. Beccari" (MSNG);
1 ♂: "Urung Tama Sibolangit, E. Sumatra, 17-18.IX.1998, H. Takizawa leg." (NMNS); 1 ♂, same locality and collector, 26.X.1999 (NMNS).

Variation: all individuals from Java are brown and their penis is longer, reaching apex of parameres.

Distribution: East Malaysia (Sabah, Sarawak), Indonesia (Java, Sumatra: new records).

***Macroebria shimadai* n. sp.** (Figs 4-7)

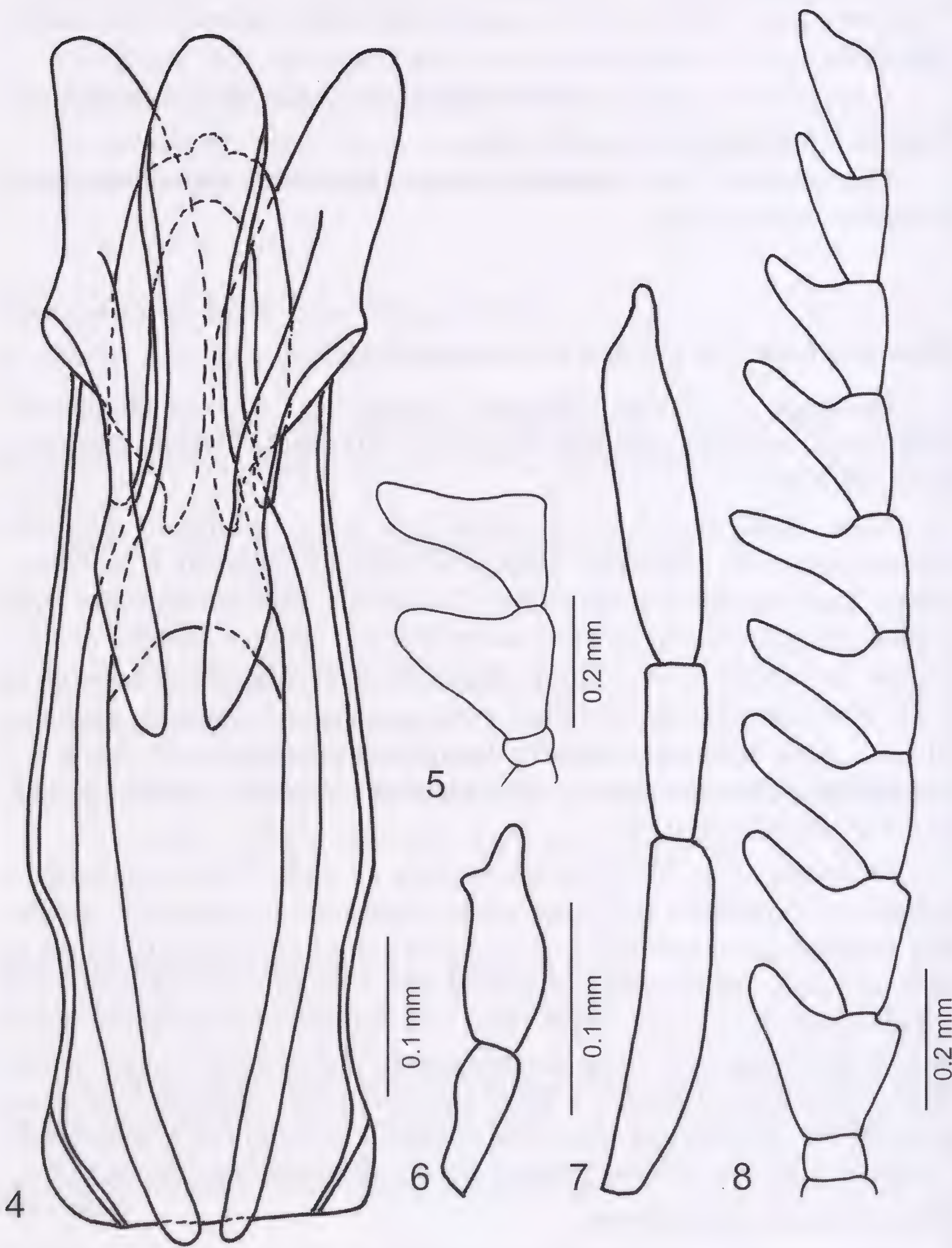
Holotype ♂: "[West Malaysia] Pahang St. Cameron Highlands, Robinson Waterfall (window trap) 12-15.III.2002, Takashi Shimada leg." (NMW).

Male. Length 2.8 mm, width 1.9 mm. Coloration blackish brown. Antennal segment 3 triangular (Fig. 5), segment 4 pectinate, others lost. Maxillary palpus (Fig. 7) slender, terminal segment with a tube-like process on apex of outer margin, relative lengths of segments 2-4 about 2.1 : 1 : 2.3. Labial palpus (Fig. 6) small, about 0.35 times as long as maxillary palpus; terminal segment medially dilated, apex bifurcate; relative lengths of segments 2-3 about 1 : 1.5. Striae pattern similar to *M. contracta*. $WP/LP = 2.55$; $LE/WE = 1.14$; $WP/WE = 0.74$.

Aedeagus (Fig. 4) 3.5 times as long as wide. Penis subequal to lengths of parameres and basal piece; narrowed at apical 2/5, gradually widened from apical 2/5 to 3/5, apex rounded. Fibula 0.3 times as long as penis, apical margin rounded with a small rounded process at middle; baso-lateral apophyses very long. Parameres wide, dorsal baso-lateral apophyses very long, reaching apical 1/3 of basal piece; ventral baso-lateral apophyses short. Basal piece gradually widened from apex to basal 1/3, moderately narrowed at basal 1/3, basal margin truncate.

E t y m o l o g y . This species is named after Takashi Shimada, who collected the holotype.

R e m a r k s : this species is similar to *M. bella* with regard to the maxillary and labial palpi, and aedeagus, but it differs from the latter by the blackish-brown color, the longer aedeagus, the wider parameres, and the rounded apex of the fibula.



Figs 4-8: *Macroebria shimadai* n. sp., male: 4 - aedeagus; 5 - antenna; 6 - labial palpus; 7 - maxillary palpus; *M. truncata*, male: 8 - antenna.

***Macroebria truncata* Lee, Yang & Satô**

Macroebria truncata Lee, Yang & Satô, 1999: 199

1 ♂: "Sibolangit, E. Sumatra, 26.X.1999, H. Takizawa leg." (NMNS).

Variation: in contrast to the serrate antennae of the holotype this specimen has pectinate antennae (Fig. 8).

Distribution: West Malaysia, Indonesia (Sumatra: new record).

***Odontanax laosensis* (Pic)**

Eubrianax laosensis Pic, 1923: 9

Odontanax laosensis (Pic): LEE, SATÔ & YANG 2000a

1 ♂, 1 ♀: "Nepal, Annapurna 1996, Sikles Mts. Garlang 1350 m, 18.4., Schmidt" (NMEG); 1 ♂: "Vietnam, N; N of Hanoi, SaPa vii. Env., 1250 m, NN Hoang Lien Son Nat. Park, 05.VI.-09.VI.1998, leg. A. Napolov" (NMEG); 1 ♂: "Vietnam, N, N of Hanoi, SaPa vii. Env., 1250 m NN Hoang Lien Son Nat. Park, 05.VI.-09.VI.1998, leg. A. Napolov" (NMEG).

Variation: one specimen from Vietnam has a brown body.

Distribution: Laos, Vietnam, India, Nepal (new record).

***Schinostethus (Sundodrupeus) priscus* Lee, Jäch & Yang**

Schinostethus (Sundodrupeus) priscus Lee, Jäch & Yang, 1998: 317

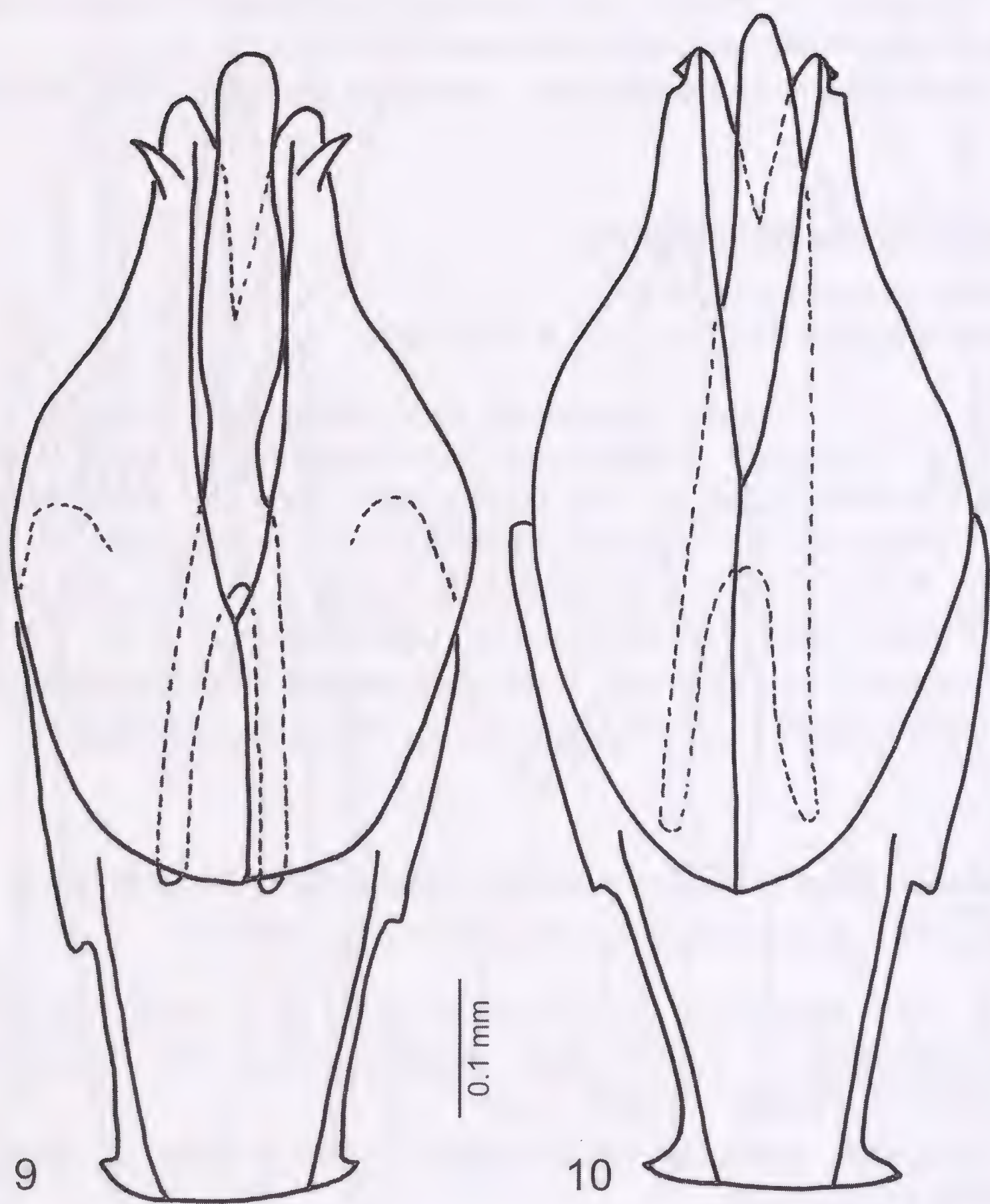
3 ♂♂: "Malaysia: Sabah Kerkot Laut, 18.VI.1999, leg. C.-F. Lee" (NMNS); 1 ♂: "Sarawak, Kuching dist., Mt. Serapi 27.-29.3.1994 J. Horák" (NMW).

Variation: medio-lateral parameral process varies in size and position (Figs 9-10).

Distribution: East Malaysia (Sabah, Sarawak: new record).

***Schinostethus (Sundodrupeus) sumatrensis* n. sp. (Figs 11-14)**

Holotype ♂: "Urung Tama, Sibolangit, E. Sumatra, 17-18.IX.1998, H. Takizawa leg." (NMW).



Figs 9-10: Variation of aedeagi of *Schinostethus* (*Sundodrupeus*) *priscus*.

Male. Length 3.1 mm; width 2.4 mm. Coloration dark brown, but eyes and antennae black. Relative lengths of rami of antennal segments 3-7 about 0.11 : 0.26 : 0.67 : 0.90 : 1 (Fig. 14). Maxillary palpus (Fig. 11) slender, terminal segment truncate, relative lengths of segments 2-4 about 3.0 : 1 : 1.9. Labial palpus (Fig. 12) small, about 0.5 times as long as maxillary palpus, segment 2 subequal to segment 3; apical margin irregular. $WP/LP = 2.61$; $LE/WE = 1.13$; $WP/WE = 0.74$.

Aedeagus (Fig. 13) 2.6 times as long as wide. Penis long, 0.85 times total length of aedeagus, apex rounded, gradually narrowed toward middle, abruptly widened behind middle. Parameres widest at connection with phallobase, slightly narrowed at apical 1/3; latero-apical processes broadly rounded, medio-apical processes widely connected with latero-apical process basally and laterally, apex curved and acute.

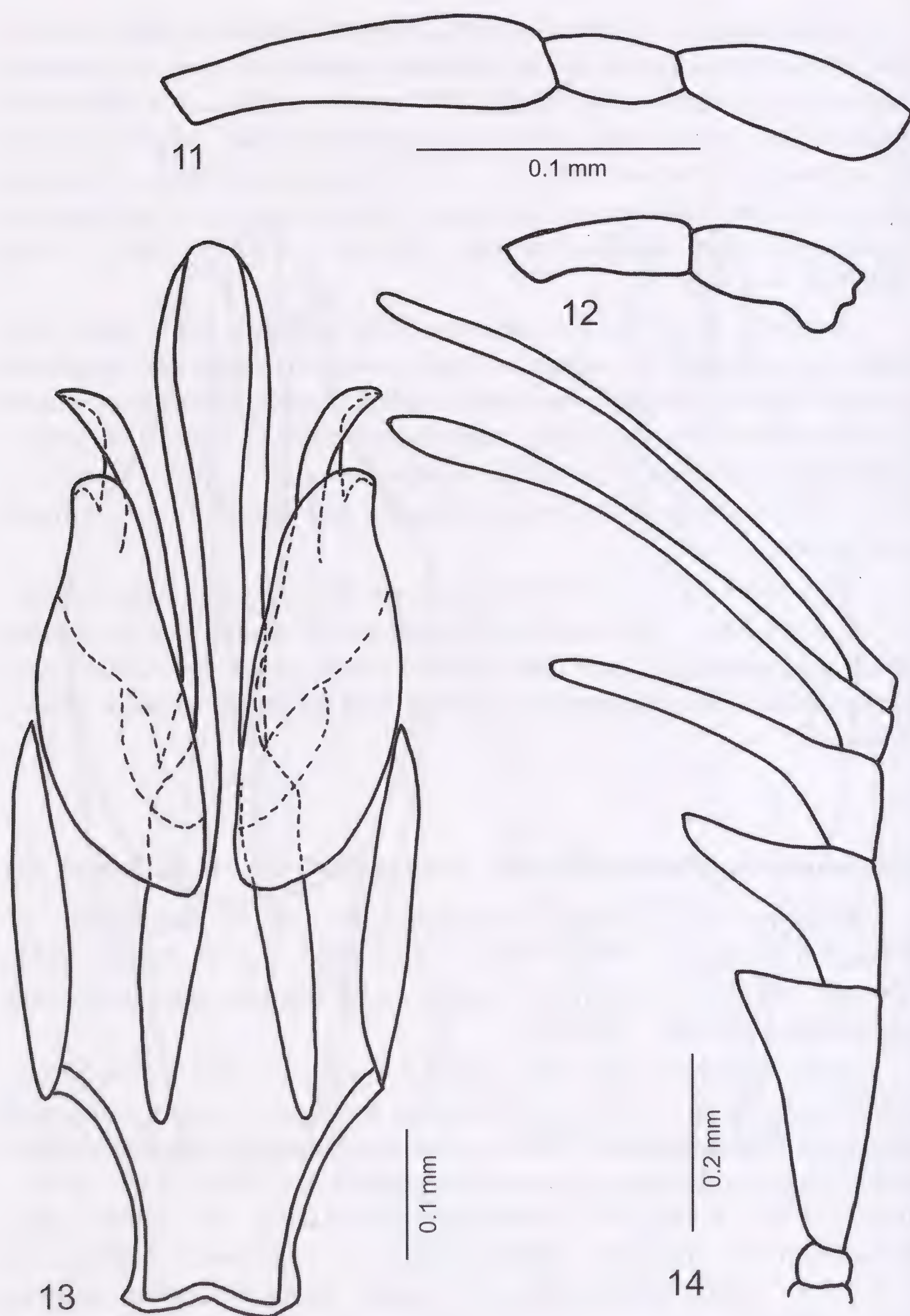
E t y m o l o g y . This species is named after the type locality.

R e m a r k s : this species is close to *S. sakaii* due to similar color and aedeagus, but differs by its long penis, by the unique articulation of the parameral processes, and by the short third antennomere.

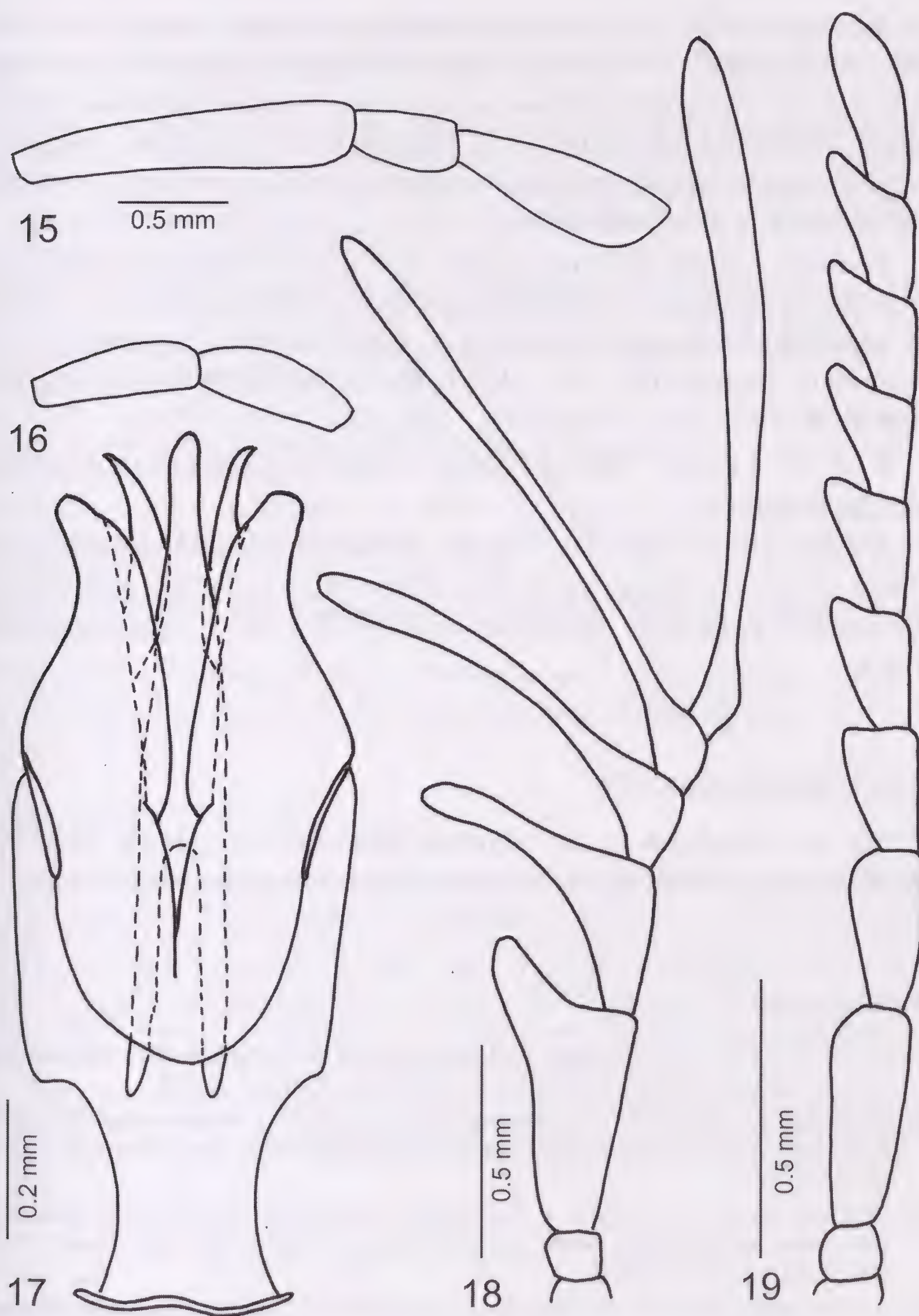
***Schinostethus (Sundodrupeus) transversus* n. sp.** (Figs 15-19)

Holotype ♂: "India: Uttaranchal 30 km N Bageshwar W Loharket [village] / 1800-1900 m, 24.VI.2003, leg. Z. Kejval & M. Tryzna" (NMW). Paratypes: 7 males and 2 females, same label data as holotype (NMW, NMNS).

Male: length 4.7-5.2 mm, width 3.1-3.4 mm. Coloration blackish-brown, except prothorax (including pronotum, prosternum, and proepisternum) yellowish brown, pronotum medially darkened. Relative lengths of rami of antennal segments 3-7 about 0.20 : 0.33 : 0.62 : 0.92 : 1 (Fig. 18). Maxillary palpus (Fig. 15) slender, terminal segment truncate, relative lengths of segments 2-4 about 3.2 : 1 : 2.1. Labial palpus (Fig. 16) small, about 0.5 times as long as maxillary palpus, segment 2 subequal to segment 3; terminal margin truncate. $WP/LP = 2.61-2.74$; $LE/WE = 1.13-1.16$; $WP/WE = 0.83-0.85$.



Figs 11-14: *Schinostethus (Sundodrupeus) sumatrensis* n. sp., male. 11 - maxillary palp; 12 - labial palp; 13 - aedeagus; 14 - antenna.



Figs 15-19: *Schinostethus (Sundodrupeus) transversus* n. sp. 15 - maxillary palpus; 16 - labial palpus; 17 - aedeagus; 18 - male antenna; 19 - female antenna.

Aedeagus (Fig. 17) 2.6 times as long as wide. Penis long, 0.76 times total length of aedeagus, apex rounded, gradually narrowed toward apex. Parameres widest at connection with phallobase, moderately narrowed at apical 1/3; latero-apical processes narrowly rounded, medio-apical process connected with latero-apical process basally, apex curved and acute.

Female. Length 5.8 mm, width 4.1 mm. Coloration similar to male, but black band on pronotum reduced to a small spot. Antennal segment 3 elongate, segment 4 feebly serrate, segments 5-10 moderately serrate (Fig. 19). $WP/LP = 2.69$; $LE/WE = 1.11$; $WP/WE = 0.78$.

Etymology: this species is named in reference to its transverse pronotum.

Remarks: this new species is similar to *Schinostethus flabellatus* in general appearance, but differs by its slender and curved latero-apical parameral processes and by the more transverse pronotum.

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REFERENCES

- FAIRMAIRE L., 1904 - Descriptions de Lamellicornes indo-chinois nouveaux ou peu connus - Mission Pavie Indochine (1879-1895), Paris, 3: 86-90.
- JÄCH M. & LEE C.-F., 1994 - Description of *Granuleubria*, a new genus of Eubriinae from West and South Asia (Coleoptera: Psephenidae) - *Kol. Rundsch.*, Wien, 64: 223-232.
- LEE C.-F. & YANG P.-S., 1996 - Taxonomic revision of the Oriental species of *Dicranopselaphus* Guérin-Méneville (Coleoptera: Psephenidae: Eubriinae) - *Ent. scand.*, Lund, 27: 169-196.
- LEE C.-F. & YANG P.-S., 1999 - Notes on *Granuleubria* Jäch and Lee, with descriptions of four new species and the immature stages of *G. fontana*, new species (Coleoptera: Psephenidae: Eubriinae) - *Col. Bull.*, Sacramento, 53: 259-274.
- LEE C.-F., JÄCH M. & YANG P.-S., 1998 - Psephenidae: II. Synopsis of *Schinostethus* Waterhouse, with descriptions of 14 new species (Coleoptera) (pp. 303-326), in: Jäch M. & Ji L. (eds.) - Water Beetles of China. Vol. II - Zool.-bot. Gesell. in Österreich and Wiener Coleopterologenverein, Wien, 371 pp.

- LEE C.-F., SATÔ M. & YANG P.-S., 2000a - A revision of the Eubrianacinae (Coleoptera, Psephenidae) IV. *Odontanax* gen. nov. - *Jap. Journ. syst. Ent.*, Matsuyama, 6: 151-170.
- LEE C.-F., SATÔ M. & YANG P.-S., 2000b - A revision of the Eubrianacinae (Coleoptera, Psephenidae) V. *Jaechanax* gen. nov. - *Elytra*, Tokyo, 28: 119-129.
- LEE C.-F., YANG P.-S. & SATÔ M., 1997 - The eastern Asian species of the genus *Macroeubria* Pic (Coleoptera, Psephenidae, Eubriinae) - *Jap. Journ. syst. Ent.*, Matsuyama, 3: 129-160.
- LEE C.-F., YANG P.-S. & SATÔ M., 1998 - Psephenidae: I. Notes on the East Asian species of *Ectopria* LeConte (pp. 297-301), in: Jäch M. & Ji L. (eds.) - Water Beetles of China. Vol. II - Zool.-bot. Gesell. in Österreich and Wiener Coleopterologenverein, Wien, 371 pp.
- LEE C.-F., YANG P.-S. & SATÔ M., 1999 - The southeast Asian species of the genus *Macroeubria* Pic (Coleoptera, Psephenidae, Eubriinae) - *Jap. Journ. syst. Ent.*, Matsuyama, 5: 181-201.
- LEE C.-F., YANG P.-S. & SATÔ M., 2000 - A synopsis of *Dicranopselaphus* (Coleoptera: Psephenidae, Eubriinae), with descriptions of nine new species - *Ent. Science*, Tokyo, 3: 557-568.
- PIC M., 1913 - Diagnoses de Dascillides et Cyphonids nouveaux - *Échange*, Moulis, 19: 171-173.
- PIC M., 1918 - Nouveautés diverses - *Mél. exot.-ent.*, Moulis, 29: 7-24.
- PIC M., 1923 - Nouveautés diverses - *Mél. exot.-ent.*, Moulis, 40: 3-32.

ABSTRACT

New distribution records are provided for the following species: *Dicranopselaphus brevicornis* Lee & Yang, *D. emmanueli* (Pic), *D. flavus* Lee & Yang, *D. imparis* Lee & Yang, *D. malickyi* Lee & Yang, *Granuleubria pakistanica* Jäch & Lee, *Jaechanax insignis* (Fairmaire), *J. major major* (Pic), *Macroeubria bella* Lee, Yang & Satô, *M. bicolor* Lee, Yang & Satô, *M. contracta* Lee, Yang & Satô, *M. monstrosa* Lee, Yang & Satô, *M. truncata* Lee, Yang & Satô, *Odontanax laosensis* (Pic) and *Schinostethus* (*Sundodrupeus*) *priscus* Lee, Jäch & Yang.

Four new species are described and illustrated: *Ectopria iranensis* n. sp., from Iran, *Macroeubria shimadai* n. sp., from Malaysia, *S. (Sundodrupeus) sumatrensis* n. sp., from Sumatra and *Schinostethus* (*Sundodrupeus*) *transversus* n. sp., from India.

RIASSUNTO

Nuove specie e nuovi reperti di Psephenidae dell'Asia (Coleoptera).

Si forniscono nuovi dati sulla distribuzione delle seguenti specie: *Dicranopselaphus brevicornis* Lee & Yang, *D. emmanueli* (Pic), *D. flavus* Lee & Yang, *D. imparis* Lee & Yang, *D. malickyi* Lee & Yang, *Granuleubria pakistanica* Jäch & Lee, *Jaechanax insignis* (Fairmaire), *J. major major* (Pic), *Macroebria bella* Lee, Yang & Satô, *M. bicolor* Lee, Yang & Satô, *M. contracta* Lee, Yang & Satô, *M. monstrosa* Lee, Yang & Satô, *M. truncata* Lee, Yang & Satô, *Odontanax laosensis* (Pic) e *Schinostethus* (*Sundodrupeus*) *priscus* Lee, Jäch & Yang.

Sono inoltre descritte ed illustrate quattro nuove specie: *Ectopria iranensis* n. sp., dell'Iran, *Macroebria shimadai* n. sp., della Malaysia, *S.* (*Sundodrupeus*) *sumatrensis* n. sp., di Sumatra and *Schinostethus* (*Sundodrupeus*) *transversus* n. sp., dell'India.